

METAL FLUID

M. F. is a mixture of metal grit in a resin binder to be used in silicone rubber moulds, to realize metal pieces without smelting.

Produces a 95% pure sintered metal, as the resins in excess will be removed, and the object can be smoothed and polished to bring out the metal's shine.

Metal Fluid is available in four metals:

BRONZE
BRASS
COPPER
ALUMINIUM

Components properties:

Resin component:

APPEARANCE	Liquid
ODOUR	Pungent (for styrene)
SPECIFIC WEIGHT	1,1 / 0,1 gr /cm ³
MELTING POINT	Styrene - 30°C
BOILING POINT	Styrene 145°C
FLASH POINT	" 32°C
FIRE POINT	" 490°C
FLAMMABILITY LIMITS	" 1,1 / 8 %
VAPOUR DENSITY	" 3,6
SOLUBILITY IN WATER	" 0,031%

Component Bronze

APPEARANCE	Powder
COLOUR	Gold - brown
SPECIFIC WEIGHT	8,2 / 8,9 gr /cm ³
DENSITY	2,0 / 5 gr /cm ³
MELTING POINT	730 / 1.080
BOILING POINT	1.300 / 2.590
BLAST CAPACITY	no
FLAMMABILITY	no
SOLUBILITY IN WATER	no

Component Brass

APPEARANCE	Powder
COLOUR	gold - yellow
SPECIFIC WEIGHT	8 / 8,7 gr /cm ³
DENSITY	2 / 4 gr /cm ³
MELTING POINT	860 - 1050
BOILING POINT	1.500
BLAST CAPACITY	1.000 gr/m ³
FLAMMABILITY	no
SOLUBILITY IN WATER	no

Component Aluminium

APPEARANCE	Powder
COLOUR	Silver - grey
SPECIFIC WEIGHT	7,14 gr / cm ³
DENSITY	1,5 - 3,5 gr/cm ³
MELTING POINT	419
BOILING POINT	908
BLAST CAPACITY	490 gr /m ³
FLAMMABILITY	no
SOLUBILITY IN WATER	no

Component Copper

APPEARANCE	Powder
COLOUR	Red copper
SPECIFIC WEIGHT	8,9 gr /cm ³
DENSITY	0,65 – 5,5 gr /cm ³
MELTING POINT	1.089
BOILING POINT	2.567
BLAST CAPACITY	--
FLAMMABILITY	no
SOLUBILITY IN WATER	no

Ratio:

80 gr powder / 20 gr resin

1 kg blend = 200 cc

Catalyst ratio : 2 % (using a syringe 1cc = 1gr ; using a eye dropper 1 drop = 1gr)

General hints:

Take from the container the resin in the right quantity, add 2% of catalyst, mix them and gradually add the metallic powder, to obtain a homogeneous blend.

Cast into the mould slowly, to avoid air bubbles, even using a tool like a needle, to help the escape of the air bubbles.

Hardening starts in 20 minutes, and finishes in 60 – 90 minutes.

During that process, the metallic powder solidifies, and the excess of resins came up to the surface can then be sanded, also to bring out the metal's shine, using glass paper, or a metallic brush, and finally a polishing paste.

The final piece, like a metallic object, oxides if exposed to the air. So cover it with a transparent protection, or polish it frequently, to preserve its shine. To speed up the oxidation process, and obtain an antique impression, just sponge over with acid solutions.

Metal Fluid is a flammable product

It gives off a styrene odour

Keep away from children

Do not throw residues in sewers.



Ideas and creative solutions

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